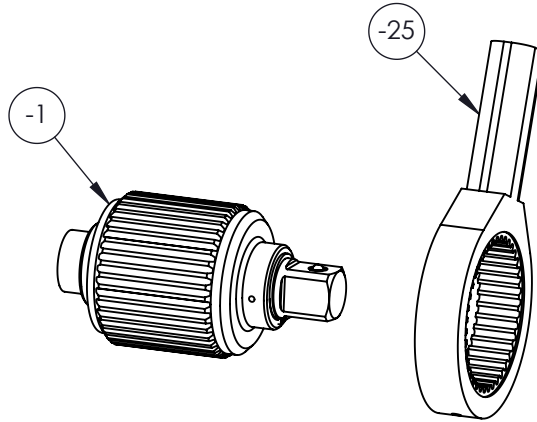



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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		RELEASED FOR PRODUCTION	4/16/2015	PMW	JAG
2	15-0217	CH'D TITLE WAS TORQUE MULTIPLIER IS TORQUE MULTIPLIER & COUNTER HOLDER.	8/31/2015	DPD	JAG
3	17-0015	UPDATED TO NEW DRAFTING STANDARD. -3 CH'D PRESSURE ANGLE WAS 14.5° IS 30°. CH'D FINISH WAS NICKEL PLATE IS ZINC PLATE SPEC. ASTM B633 TYPE 1 SC 2. DELETED VALUES ENTERED NOTE. -5, -7, -9, -11, -13, -17, -19, -27 ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D. -5 CH'D DIM'S WAS 8X R.13 IS 8X R.19. WAS 4X Ø.4794/.4766 ∇ 1.387 IS 4X Ø.455 THRU ALL Ø.4794/.4766 ∇ 1.385. DELETED DIM'S 4X Ø.455 ∇ 1.427, Ø1.74, .13. ADDED DIM R.130/.115. -6 CH'D DIM WAS 1.220 IS 1.184. -7, -9, -11, -13, -27 DELETED VALUES ENTERED NOTE. -7 CH'D DIM WAS 8X R.12 IS 8X R.19. ADDED PRESSURE ANGLE 14.5° TO SPLINE DATA TABLE. -9 CH'D DIM WAS 1.460 IS 1.377/1.372. -11 ADDED DIM .983/.978. -13 CH'D DIM WAS 2X .06 X 45° IS 2X .09 X 45°. CH'D DIM WAS Ø.4794/.4766 THRU IS Ø.4794/.4766 THRU ALL (S.F. -17). -15 CH'D MATERIAL WAS 321 S.S. IS 304 S.S. -19 ADDED DIM'S (2.362), (.433), (M6x1.0). -27 ADDED DIM MINOR DIAMETER Ø3.070. ADDED ENGRAVE T/N, S/N NOTE.	1/30/2017	RJC	JAG



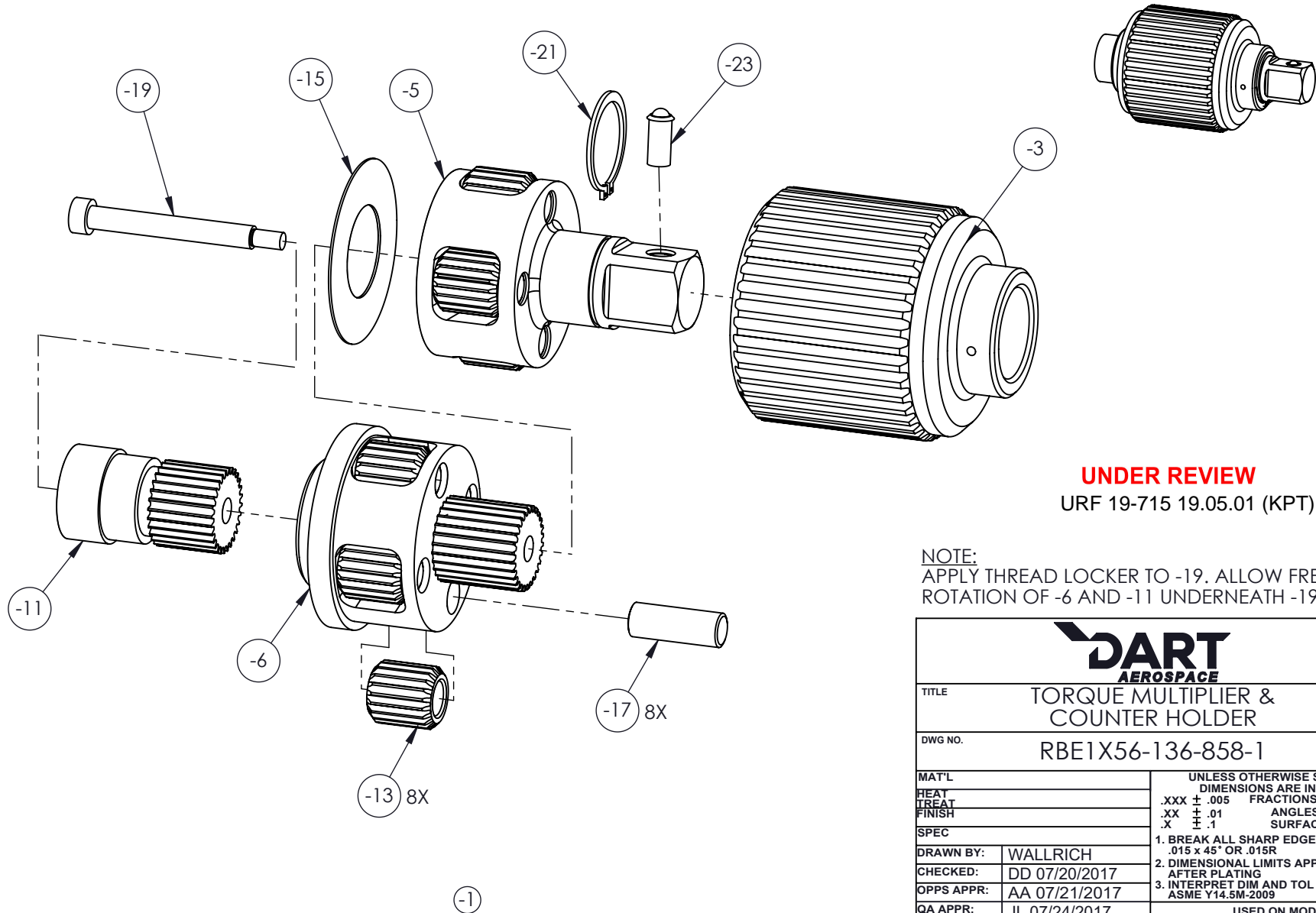
ASSY QTY	ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
		X		-1	1	TORQUE MULTIPLIER ASSY			2
		1		-3		HOUSING	4140/4142		3
		1		-5		CARRIER FRONT	4140/4142		4
	X	1		-6		CARRIER REAR ASSY			5
	1			-7		CARRIER REAR	4140/4142		6
	1			-9		GEAR SUN	4140/4142		7
		1		-11		SQ. DR. GEAR	4140/4142		8
		8		-13		GEAR PLANET	4140/4142		9
		1		-15		WASHER	304 S.S.		10
		8		-17		PIN, DOWEL	STEEL	12MM X 36 MM (MCMaster-CARR# 91595A741) MODIFIED	11
		1		-19		BOLT, SHOULDER	ALLOY STEEL	8MM X 60MM (MCMaster-CARR# 92981A215) MODIFIED	12
		1	B/O	-21		RING, RETAINING		32 MM X 1.5 THICK (MCMaster-CARR# 98541A139)	2
		1	B/O	-23		SPRING PLUNGER	STEEL	.25 NOSE DIA (MCMaster-CARR# 84835A24)	2
X				-25	1	COUNTER HOLDER ASSY			13
1				-27		COUNTER HOLDER	4140/4142		14
1			B/O	-29		SET SCREW	STEEL	M6 X 1 X 8 (MCMaster-CARR# 94285A515)	13
ASSY -25	ASSY -6	ASSY -1							

UNDER REVIEW
URF 19-715 19.05.01 (KPT)

 TORQUE MULTIPLIER & COUNTER HOLDER		REV 3
TITLE		
DWG NO.		RBE1X56-136-858
MAT'L		UNLESS OTHERWISE SPECIFIED
HEAT TREAT		DIMENSIONS ARE IN INCHES
FINISH		FRACTIONS ± 1/8
SPEC		ANGLES ± 5°
DRAWN BY: WALLRICH		SURFACES = 125/✓
CHECKED: DD 07/20/2017		1. BREAK ALL SHARP EDGES
OPPS APPR: AA 07/21/2017		.015 x 45° OR .015R
QA APPR: JL 07/24/2017		2. DIMENSIONAL LIMITS APPLY
APPROVED: JAG 07/26/2017		AFTER PLATING
SCALE 1:4		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
DATE 4/16/2015		USED ON MODEL
SHEET 1 OF 14		EC 135, EC635, H135

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED



UNDER REVIEW
URF 19-715 19.05.01 (KPT)

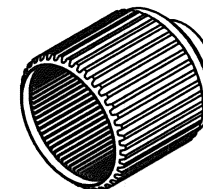
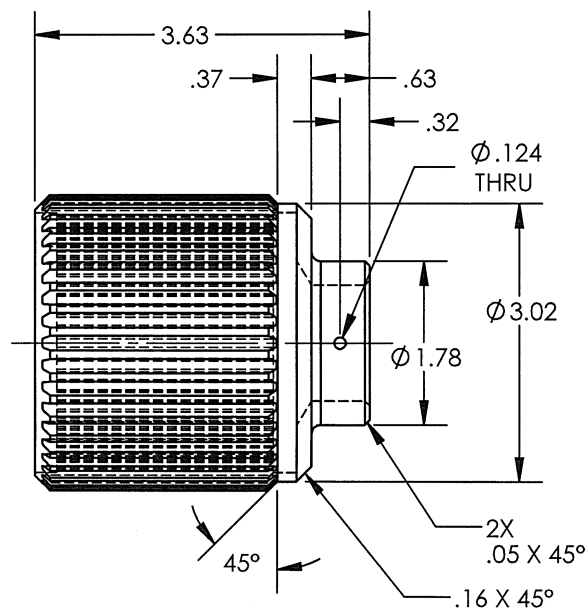
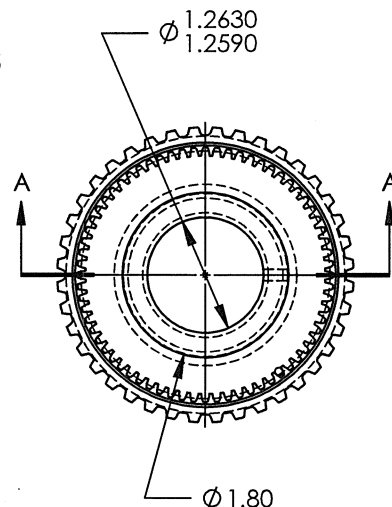
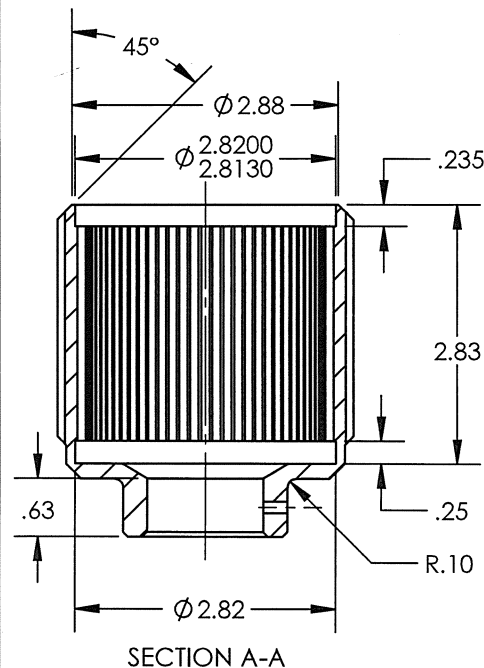
NOTE:
APPLY THREAD LOCKER TO -19. ALLOW FREE
ROTATION OF -6 AND -11 UNDERNEATH -19.

TORQUE MULTIPLIER ASSY

DART AEROSPACE	
TITLE TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO. RBE1X56-136-858-1	REV 3
MAT'L	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± 5°
	.X ± .1 SURFACES = 125/
DRAWN BY: WALLRICH	1. BREAK ALL SHARP EDGES
CHECKED: DD 07/20/2017	.015 x 45° OR .015R
OPPS APPR: AA 07/21/2017	2. DIMENSIONAL LIMITS APPLY
QA APPR: JL 07/24/2017	AFTER PLATING
APPROVED: JAG 07/26/2017	3. INTERPRET DIM AND TOL PER
SCALE 1:2	ASME Y14.5M-2009
DATE 4/16/2015	USED ON MODEL
	EC 135, EC635, H135
	SHEET 2 OF 14

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-3 CH'D PRESSURE ANGLE WAS 14.5° IS 30°. CH'D FINISH WAS NICKEL PLATE IS ZINC PLATE SPEC. ASTM B633 TYPE 1 SC 2. DELETED VALUES ENTERED NOTE.	1/30/2017	RJC	JAG



(3)

HOUSING

UNDER REVIEW

URF 19-715 19.05.01 (KPT)

NOTE:

THE INTERNAL GEAR IS A RING GEAR THAT HAS TO MESH WELL WITH THE -13 PLANET GEAR.
PITCH DIAMETERS: RING: 68MM, SUN: 28MM, PLANET: 20MM, CARRIER: 48MM.

NOTE:

THE EXTERNAL SPLINE HAS TO SLIP EASILY INTO THE -27 INTERNAL SPLINE.

INTERNAL GEAR DATA	
No. OF TEETH	68
PITCH DIAMETER	2.677
MODULE	1
PRESSURE ANGLE	30°
MAJOR DIAMETER	
MINOR DIAMETER	2.596
MEASUREMENT UNDER PINS	2.541
PIN DIAMETER	.0864
FILLET RADIUS	

EXTERNAL SPLINE DATA	
No. OF TEETH	40
PITCH DIAMETER	3.150
MODULE	2
PRESSURE ANGLE	20°
MAJOR DIAMETER	81.280
MINOR DIAMETER	77.470
MEASUREMENT CHORDAL/PINS	3.344
PIN DIAMETER	0.1428
FILLET RADIUS	

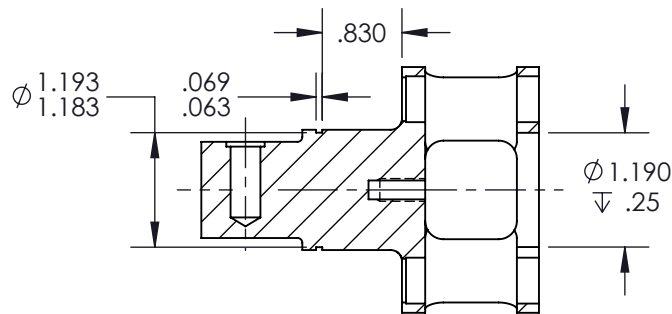
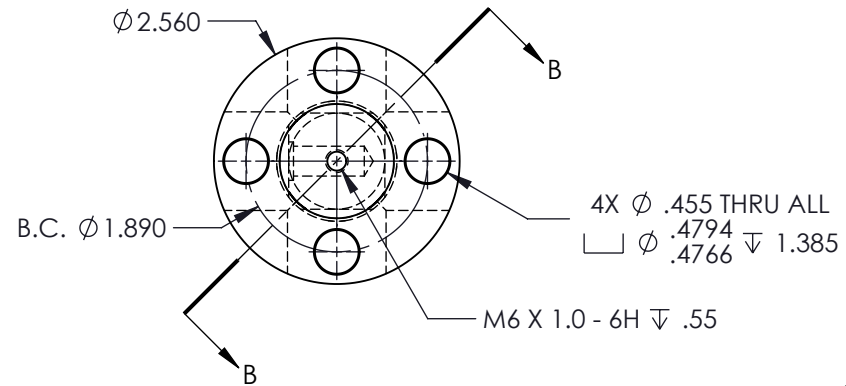
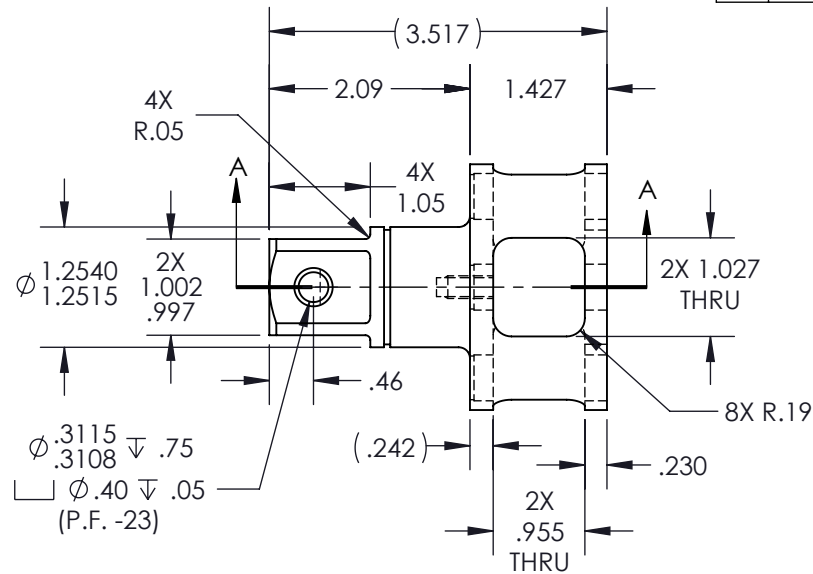
OVER PINS

DART AEROSPACE	
TITLE TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO. RBE1X56-136-858-3	REV 3
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED
HEAT TREAT RC 50-54	DIMENSIONS ARE IN INCHES
FINISH ZINC PLATE	.XXX ± .005 FRACTIONS ± 1/8
SPEC ASTM B633 TYPE 1 SC 2	.XX ± .01 ANGLES ± .5°
	.X ± .1 SURFACES = 125/
DRAWN BY: WALLRICH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DD 07/20/2017	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: AA 07/21/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: JL 07/24/2017	USED ON MODEL
APPROVED: JAG 07/26/2017	EC 135, EC635, H135
SCALE 1:2	DATE 4/16/2015 SHEET 3 OF 14

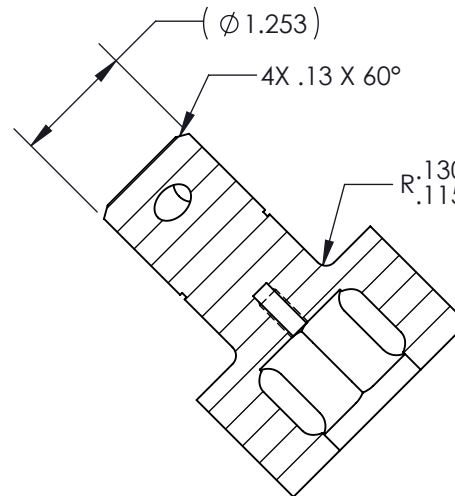
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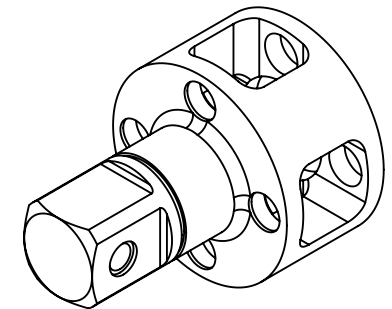
REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-5 CH'D DIM'S WAS 8X R.13 IS 8X R.19, WAS 4X Ø.4794/.4766 ∇ 1.387 IS 4X Ø.455 THRU ALL Ø.4794/.4766 ∇ 1.385, DELETED DIM'S 4X Ø.455 ∇ 1.427, Ø1.74, .13. ADDED DIM R.130/.115. ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D.	1/30/2017	RJC	JAG



SECTION A-A



SECTION B-B



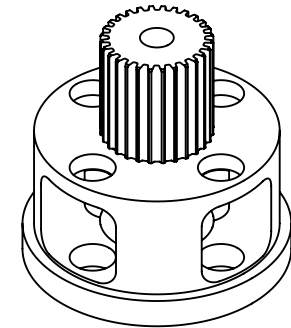
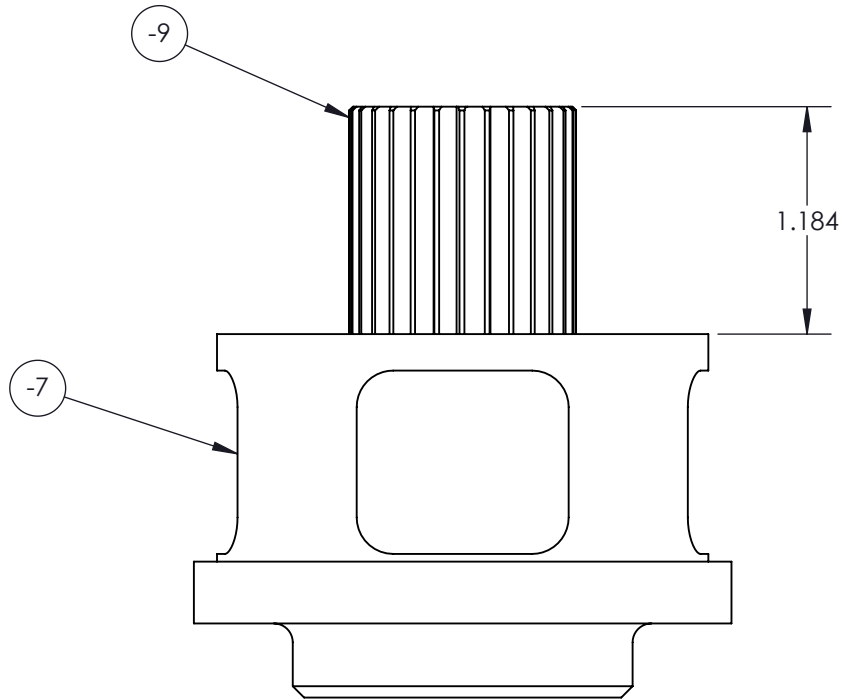
UNDER REVIEW
URF 19-715 19.05.01 (KPT)

(-5)
CARRIER FRONT

DART AEROSPACE		
TITLE TORQUE MULTIPLIER & COUNTER HOLDER		
DWG NO. RBE1X56-136-858-5	REV 3	
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED	
HEAT TREAT RC 44-48	DIMENSIONS ARE IN INCHES	
FINISH BLACK OXIDE	.XXX \pm .005 FRACTIONS \pm 1/8	
SPEC QMSI-6.2.2, B.O. REV D	.XX \pm .01 ANGLES \pm 5°	
DRAWN BY: WALLRICH	.X \pm .1 SURFACES = 125°	
CHECKED: DD 07/20/2017	1. BREAK ALL SHARP EDGES	
OPPS APPR: AA 07/21/2017	.015 x 45° OR .015R	
QA APPR: JL 07/24/2017	2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
APPROVED: JAG 07/26/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
SCALE 1:2	DATE 4/16/2015	SHEET 4 OF 14

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-6 CH'D DIM WAS 1.220 IS 1.184.	1/30/2017	RJC	JAG



UNDER REVIEW
URF 19-715 19.05.01 (KPT)

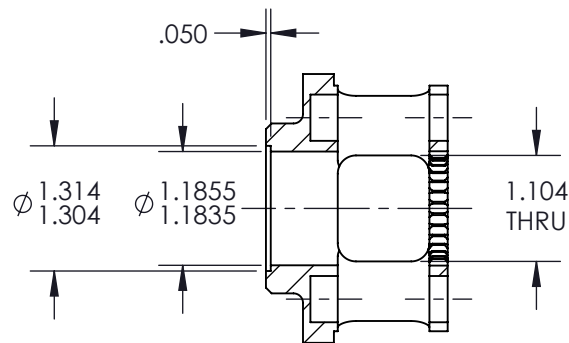
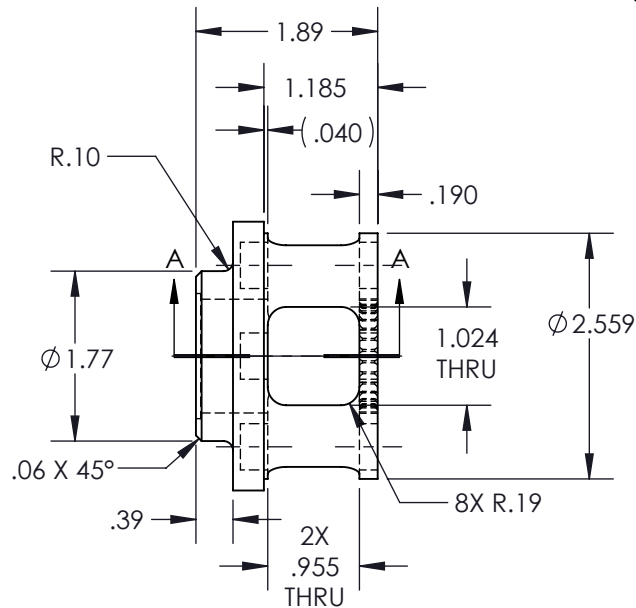
NOTE:
MEDIUM FORCE INTERFERENCE FIT BETWEEN
-7 AND -9.

(-6)
CARRIER REAR ASSY

DART AEROSPACE	
TITLE TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO. RBE1X56-136-858-6	REV 3
MAT'L HEAT TREAT FINISH	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/
SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: WALLRICH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED: DD 07/20/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR: AA 07/21/2017	USED ON MODEL
QA APPR: JL 07/24/2017	EC 135, EC635, H135
APPROVED: JAG 07/26/2017	
SCALE 1:1	DATE 4/16/2015 SHEET 5 OF 14

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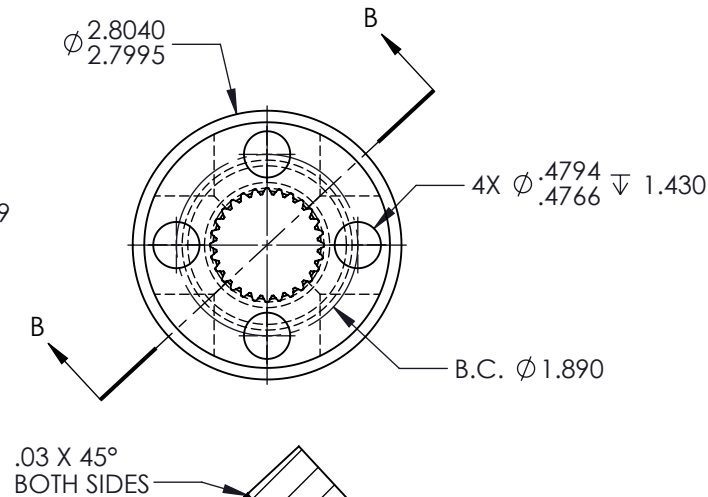
REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-7 CH'D DIM WAS 8X R.12 IS 8X R.19. ADDED PRESSURE ANGLE 14.5° TO SPLINE DATA TABLE. ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D. DELETED VALUES ENTERED NOTE.	1/30/2017	RJC	JAG



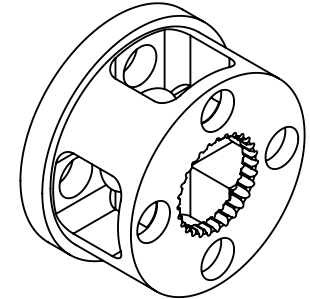
SECTION A-A

(-7)

CARRIER REAR



SECTION B-B



UNDER REVIEW
URF 19-715 19.05.01 (KPT)

NOTES:
THE INTERNAL SPLINE IS TO BE CUT AS AN INTERFERENCE FIT OF MEDIUM FORCE MATING WITH THE -9 GEAR.

INTERNAL SPLINE DATA		DART AEROSPACE	
No. OF TEETH	28	TITLE	TORQUE MULTIPLIER & COUNTER HOLDER
PITCH DIAMETER	1.102	DWG NO.	RBE1X56-136-858-7
MODULE	1	REV	3
PRESSURE ANGLE	14.5°	MAT'L	4140/4142
MAJOR DIAMETER		HEAT TREAT	RC 35-39
MINOR DIAMETER		FINISH	BLACK OXIDE
MEASUREMENT UNDER PINS		SPEC	QMSI-6.2.2, B.O. REV D
PIN DIAMETER		DRAWN BY:	WALLRICH
FILLET RADIUS		CHECKED:	DD 07/20/2017
		OPPS APPR:	AA 07/21/2017
		QA APPR:	JL 07/24/2017
		APPROVED:	JAG 07/26/2017
		SCALE	1:2
		DATE	4/16/2015
		SHEET	6 OF 14

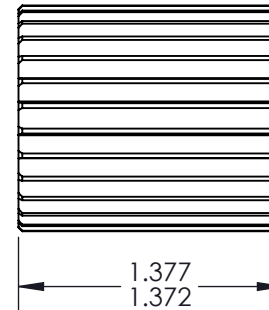
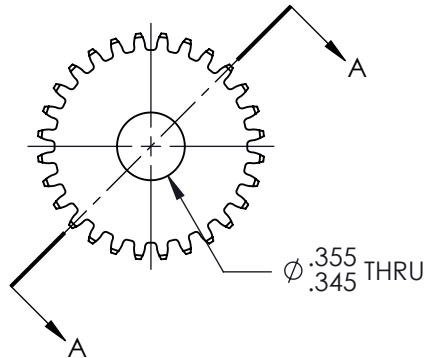
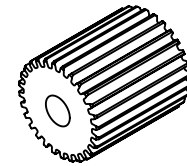
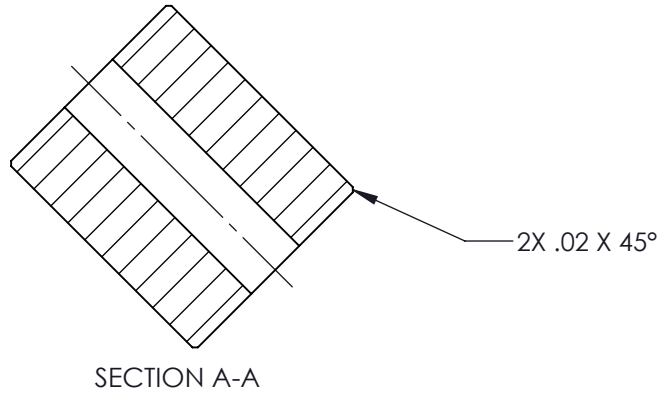
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
.XXX ± .005 FRACTIONS ± 1/8
.XX ± .01 ANGLES ± .5°
.X ± .1 SURFACES = 125°
1. BREAK ALL SHARP EDGES
.015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY
AFTER PLATING
3. INTERPRET DIM AND TOL PER
ASME Y14.5M-2009

USED ON MODEL

EC 135, EC635, H135

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-9 CH'D DIM WAS 1.460 IS 1.377/1.372. ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D. DELETED VALUES ENTERED NOTE.	1/30/2017	RJC	JAG



UNDER REVIEW
URF 19-715 19.05.01 (KPT)

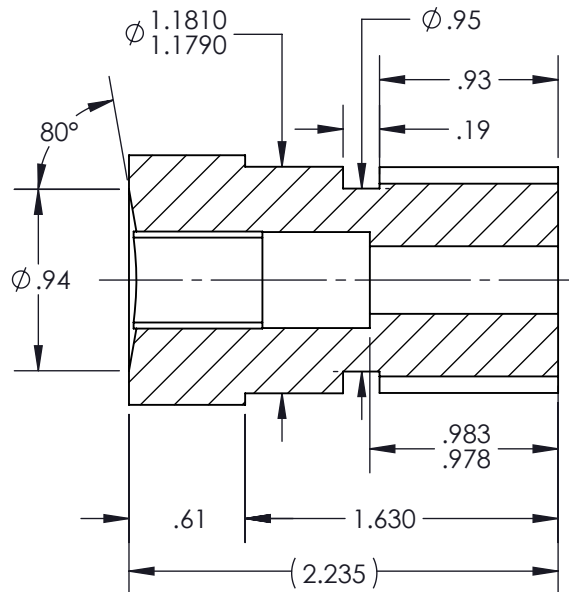
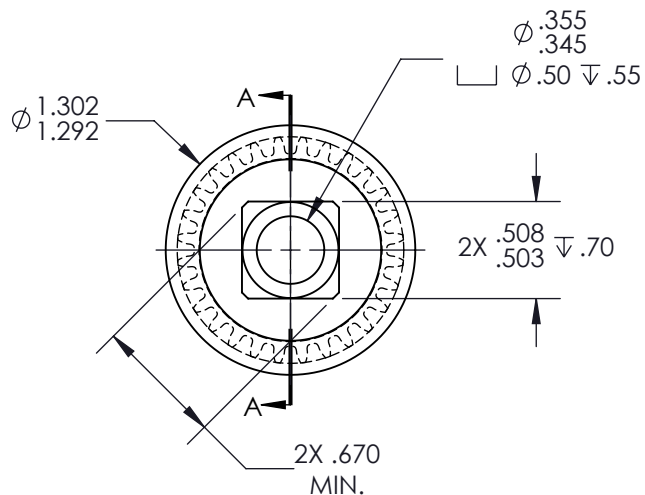
EXTERNAL SPUR GEAR DATA	
No. of TEETH	28
PITCH DIAMETER	1.102
MODULE	1
PRESSURE ANGLE	14.5°
MAJOR DIAMETER	1.181
MINOR DIAMETER	1.004
CHORDAL MEASUREM OVER 3 TEETH	.296
FILLET RADIUS	.012

(-9)
GEAR SUN

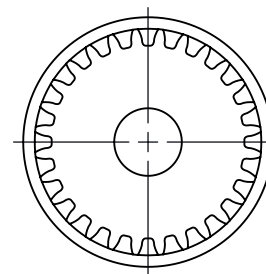
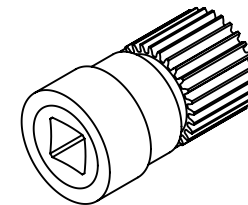
TITLE		TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO.		RBE1X56-136-858-9	REV 3
MAT'L 4140/4142		UNLESS OTHERWISE SPECIFIED	
HEAT TREAT RC 44-48		DIMENSIONS ARE IN INCHES	
FINISH BLACK OXIDE		.XXX ± .005 FRACTIONS ± 1/8	
SPEC QMSI-6.2.2, B.O. REV D		.XX ± .01 ANGLES ± 5°	
DRAWN BY: WALLRICH		.X ± .1 SURFACES = 125°	
CHECKED: DD 07/20/2017		1. BREAK ALL SHARP EDGES	
OPPS APPR: AA 07/21/2017		.015 x 45° OR .015R	
QA APPR: JL 07/24/2017		2. DIMENSIONAL LIMITS APPLY	
APPROVED: JAG 07/26/2017		AFTER PLATING	
SCALE 1:1		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DATE 4/16/2015		USED ON MODEL	
SHEET 7 OF 14		EC135, EC635, H135	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-11 ADDED DIM .983/.978, ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D. DELETED VALUES ENTERED NOTE.	1/30/2017	RJC	JAG



SECTION A-A



UNDER REVIEW
URF 19-715 19.05.01 (KPT)

EXTERNAL SPUR GEAR DATA	
No. of TEETH	28
PITCH DIAMETER	1.102
MODULE	1
PRESSURE ANGLE	14.5°
MAJOR DIAMETER	1.1810 1.1790
MINOR DIAMETER	1.004
SPAN OF 3 TEETH	.296
FILLET RADIUS	.012

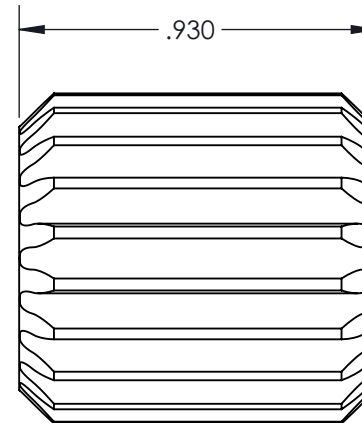
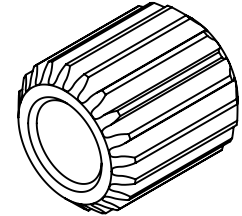
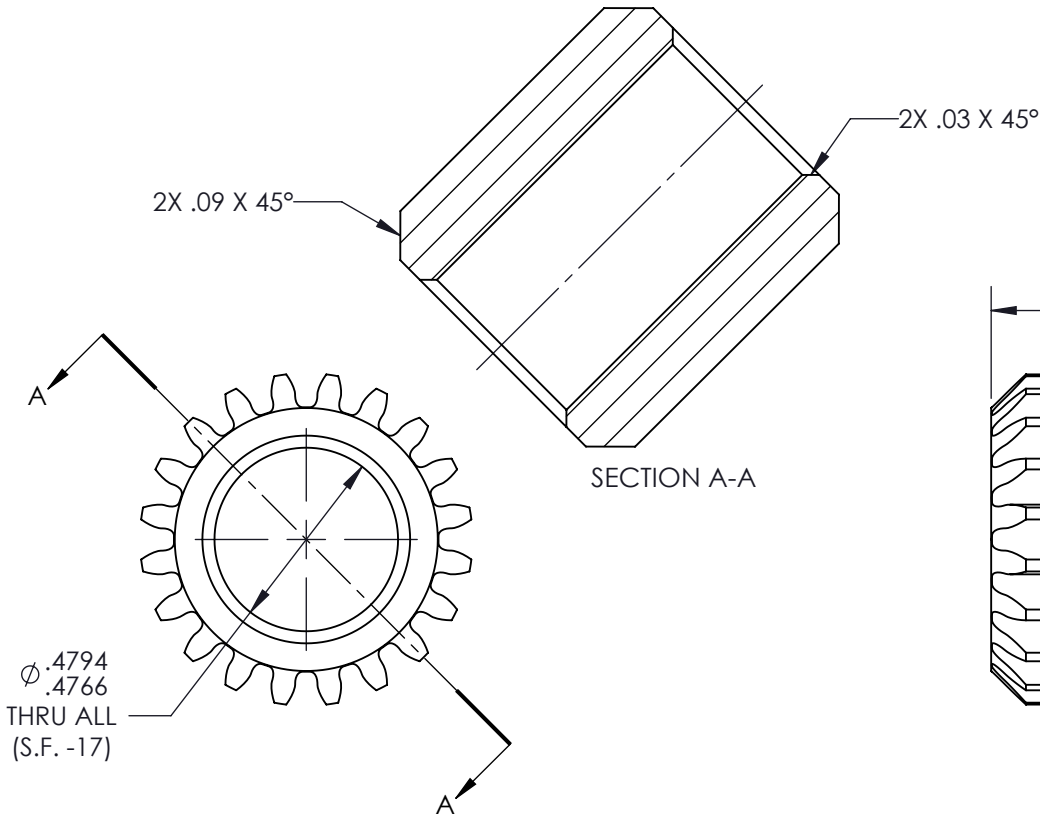
(11)

SQ. DR. GEAR

DART AEROSPACE			
TITLE TORQUE MULTIPLIER & COUNTER HOLDER			
DWG NO. RBE1X56-136-858-11			REV 3
MAT'L 4140/4142		UNLESS OTHERWISE SPECIFIED	
HEAT TREAT RC 50-54		DIMENSIONS ARE IN INCHES	
FINISH BLACK OXIDE		.XXX ± .005 FRACTIONS ± 1/8	
SPEC QMSI-6.2.2, B.O. REV D		.XX ± .01 ANGLES ± 5°	
DRAWN BY: WALLRICH		.X ± .1 SURFACES = 125°	
CHECKED: DD 07/20/2017		1. BREAK ALL SHARP EDGES	
OPPS APPR: AA 07/21/2017		.015 x 45° OR .015R	
QA APPR: JL 07/24/2017		2. DIMENSIONAL LIMITS APPLY	
APPROVED: JAG 07/26/2017		AFTER PLATING	
SCALE 1:1		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DATE 4/16/2015		USED ON MODEL	
SHEET 8 OF 14		EC135, EC635, H135	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-13 CH'D DIM WAS 2X .06 X 45° IS 2X .09 X 45°. CH'D DIM WAS Ø.4794/.4766 THRU IS Ø.4794/.4766 THRU ALL (S.F. -17). ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D. DELETED VALUES ENTERED NOTE.	1/30/2017	RJC	JAG



UNDER REVIEW
URF 19-715 19.05.01 (KPT)

EXTERNAL SPUR GEAR DATA	
No. of TEETH	20
PITCH DIAMETER	.787
MODULE	1
PRESSURE ANGLE	14.5°
MAJOR DIAMETER	.866
MINOR DIAMETER	.689
SPAN OF 3 TEETH	.301
FILLET RADIUS	.012

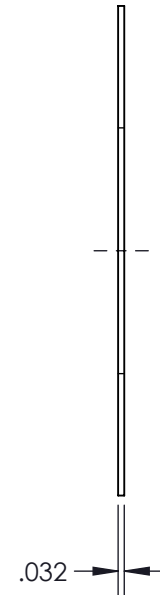
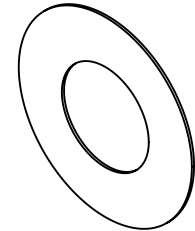
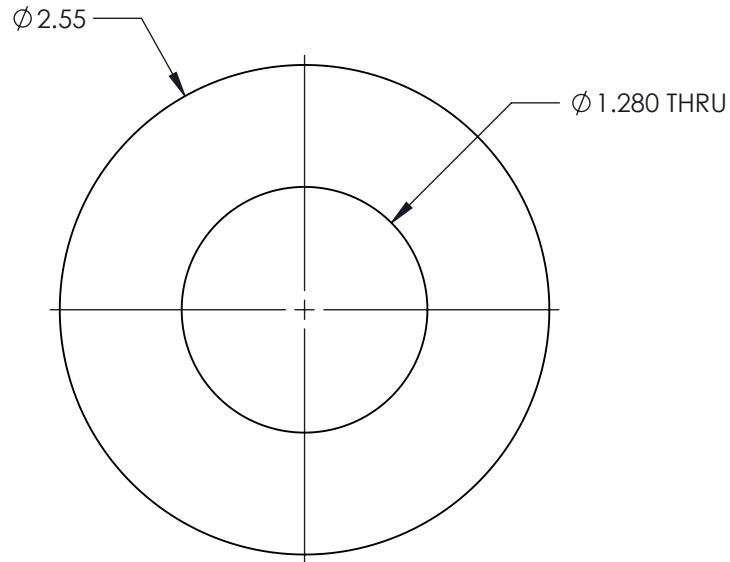
(13)

GEAR PLANET

TITLE		TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO.		RBE1X56-136-858-13	REV 3
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± .5° .X ± .1 SURFACES = 125° ✓		
HEAT TREAT RC 44-48			
FINISH BLACK OXIDE			
SPEC QMSI-6.2.2, B.O. REV D			
DRAWN BY: WALLRICH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009		
CHECKED: DD 07/20/2017			
OPPS APPR: AA 07/21/2017			
QA APPR: JL 07/24/2017	USED ON MODEL		
APPROVED: JAG 07/26/2017	EC135, EC635, H135		
SCALE 2:1	DATE 4/16/2015	SHEET 9 OF 14	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-15 CH'D MATERIAL WAS 321 S.S. IS 304 S.S.	1/30/2017	RJC	JAG



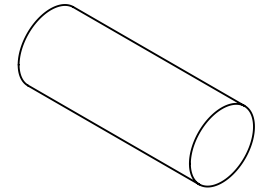
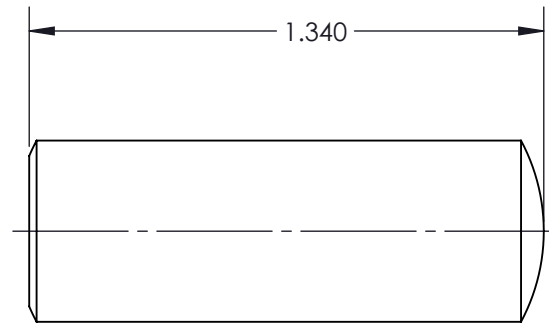
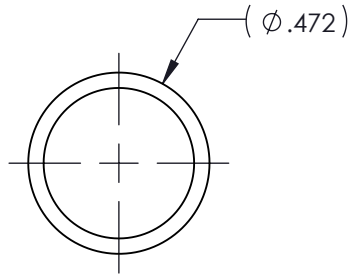
UNDER REVIEW
URF 19-715 19.05.01 (KPT)

(-15)
WASHER

DART AEROSPACE	
TITLE TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO. RBE1X56-136-858-15	REV 3
MAT'L 304 S.S.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH	.XX ± .01 ANGLES ± .5°
SPEC	.X ± .1 SURFACES = 125° ✓
DRAWN BY: WALLRICH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DD 07/20/2017	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: AA 07/21/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: JL 07/24/2017	USED ON MODEL
APPROVED: JAG 07/26/2017	EC135, EC635, H135
SCALE 1:1	DATE 4/16/2015 SHEET 10 OF 14

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-17 ADDED FINISH BLACK OXIDE, SPEC QMSI-6.2.2, B.O. REV D.	1/30/2017	RJC	RJC



UNDER REVIEW
URF 19-715 19.05.01 (KPT)

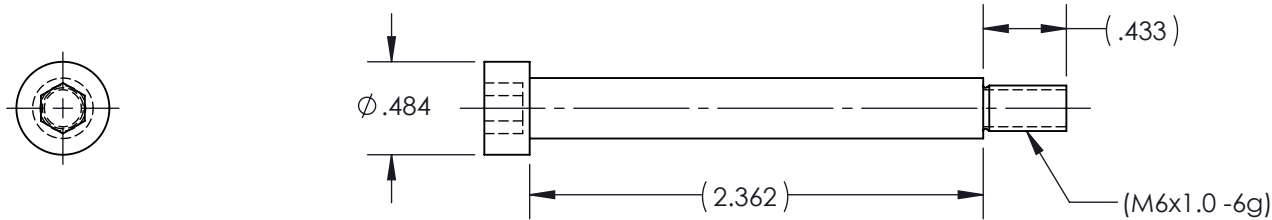
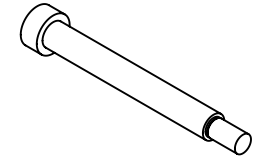
(-17)

PIN, DOWEL

DART AEROSPACE	
TITLE TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO. RBE1X56-136-858-17	REV 3
MAT'L STEEL	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH BLACK OXIDE	.XXX ± .005 FRACTIONS ± 1/8
SPEC QMSI-6.2.2, B.O. REV D	.XX ± .01 ANGLES ± .5°
DRAWN BY: WALLRICH	.X ± .1 SURFACES = 125
CHECKED: DD 07/20/2017	1. BREAK ALL SHARP EDGES
OPPS APPR: AA 07/21/2017	.015 x 45° OR .015R
QA APPR: JL 07/24/2017	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
APPROVED: JAG 07/26/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
SCALE 2:1	DATE 4/16/2015
SHEET 11 OF 14	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-19 ADDED DIM'S (2.362), (.433), (M6x1.0). ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D.	1/30/2017	RJC	JAG



UNDER REVIEW

URF 19-715 19.05.01 (KPT)

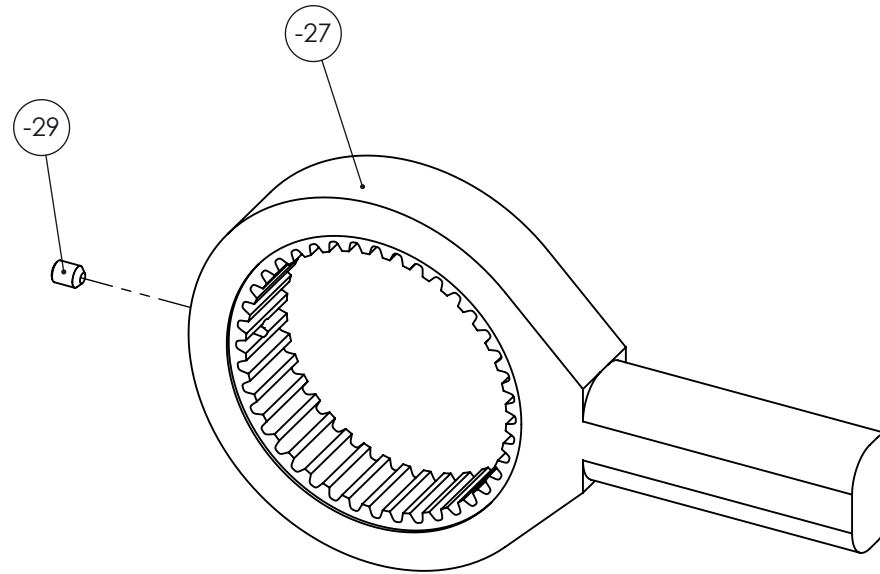
(-19)

BOLT, SHOULDER

DART AEROSPACE	
TITLE TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO. RBE1X56-136-858-19	REV 3
MAT'L ALLOY STEEL	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH BLACK OXIDE	.XXX ± .005 FRACTIONS ± 1/8
SPEC QMSI-6.2.2, B.O. REV D	.XX ± .01 ANGLES ± 5°
DRAWN BY: WALLRICH	.X ± .1 SURFACES = 125°
CHECKED: DD 07/20/2017	1. BREAK ALL SHARP EDGES
OPPS APPR: AA 07/21/2017	.015 x 45° OR .015R
QA APPR: JL 07/24/2017	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
APPROVED: JAG 07/26/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
SCALE 1:1	DATE 4/16/2015
SHEET 12 OF 14	

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
				APPROVED



UNDER REVIEW
URF 19-715 19.05.01 (KPT)

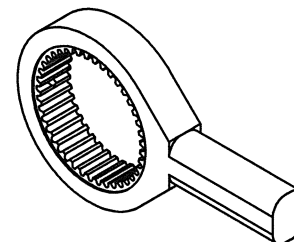
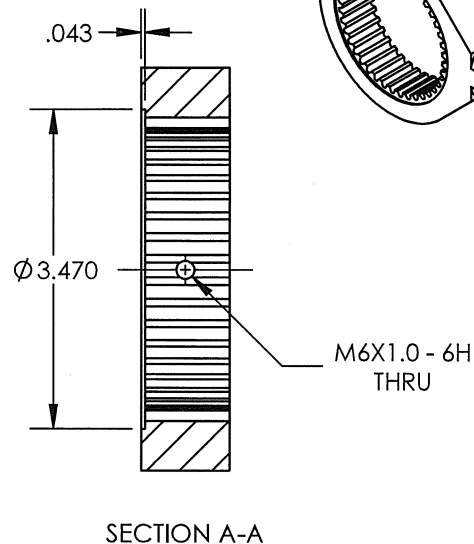
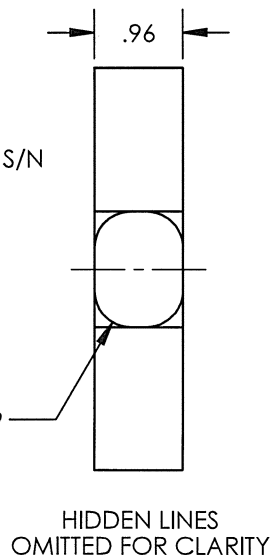
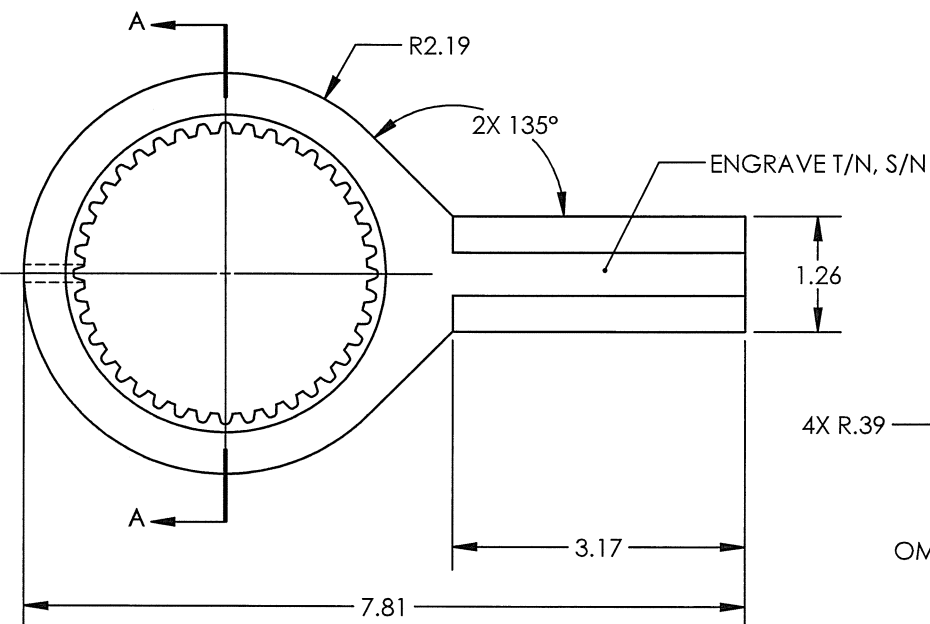
-25

COUNTER HOLDER ASSY

DART AEROSPACE	
TITLE TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO. RBE1X56-136-858-25-25	REV 3
MAT'L HEAT TREAT FINISH	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± .5° .X ± .1 SURFACES = 125°
SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: WALLRICH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED: DD 07/20/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR: AA 07/21/2017	USED ON MODEL
QA APPR: JL 07/24/2017	EC135, EC635, H135
APPROVED: JAG 07/26/2017	
SCALE 1:2	DATE 4/16/2015 SHEET 13 OF 14

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0015	-27 ADDED DIM MINOR DIAMETER Ø3.070. ADDED FINISH SPEC QMSI-6.2.2, B.O. REV D. DELETED VALUES ENTERED NOTE. ADDED ENGRAVE T/N, S/N NOTE.	1/30/2017	RJC	JAG



NOTE:
THE INTERNAL SPLINE HAS TO SLIP EASILY
OVER THE -3 EXTERNAL SPLINE.

INTERNAL SPLINE DATA	
No. OF TEETH	40
PITCH DIAMETER	3.150
MODULE	2
PRESSURE ANGLE	20°
MAJOR DIAMETER	
MINOR DIAMETER	Ø3.070
MEASUREMENT CHORDAL/PINS	2.963
PIN DIAMETER	0.1417
FILLET RADIUS	

UNDER
PINS

(-27)

COUNTER HOLDER

UNDER REVIEW
URF 19-715 19.05.01 (KPT)

DART AEROSPACE	
TITLE TORQUE MULTIPLIER & COUNTER HOLDER	
DWG NO. RBE1X56-136-858-27	REV 3
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED
HEAT TREAT RC 35-39	DIMENSIONS ARE IN INCHES
FINISH BLACK OXIDE	.XXX ± .005 FRACTIONS ± 1/8
SPEC QMSI-6.2.2, B.O. REV D	.XX ± .01 ANGLES ± .5°
DRAWN BY: WALLRICH	.X ± .1 SURFACES = 125
CHECKED: DD 07/20/2017	1. BREAK ALL SHARP EDGES
OPPS APPR: AA 07/21/2017	015 x 45° OR .015R
QA APPR: JL 07/24/2017	2. DIMENSIONAL LIMITS APPLY
APPROVED: JAG 07/26/2017	AFTER PLATING
SCALE 1:2	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
DATE 4/16/2015	USED ON MODEL
SHEET 14 OF 14	EC135, EC635, H135

19.02.28